IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Fredberg et al.	Group:	1771
Serial No.:	10/620,884	Examiner:	Singh, Arti R.
Filed:	July 16, 2003	Docket No.:	RAY-132J
For:	RADOME WITH POLYESTER-POLYARYLATE FIBERS AND METHOD OF MAKING SAME		

AFFIDAVIT UNDER 37 C.F.R. §1.131

We, Marvin I. Fredberg, Peter H. Sheahan, Sharon A. Elsworth, and Kaichang Chang, being duly sworn, depose and say:

We are the inventors for the patent application identified above and of the subject matter described and claimed therein.

We conceived in the United States the invention claimed in the above-identified patent application prior to January 23, 2003.

Prior to January 23, 2003, we had conceived of the invention as described and claimed in the subject application in the United States as evidenced by the attached Exhibits A and B, which are portions of the Invention Disclosure Detailed Description for the subject invention describing a fabric radome used to provide environmental protection for antenna equipment and polyester-polyarylate (VECTRAN®) reinforced fabric.

Exhibits A and B, which relate to the aforementioned conception, correspond to the invention disclosed and claimed in the above-identified patent application.

Each of the dates deleted from attached Exhibits A and B is prior to January 23, 2003.

In Witness Whereof, we hereto set my hand and seal at Sudbury, MA
(city, town)
this 4th day of October, 2006.

Marvin I. Fredberg

Sharon A. Elsworth

Peter H. Sheahan

Kaichang Chang

Commonwealth of [NV] Massachusetts }
County of [NV] Middlesex }

Before me this [NV] 4th day of [NV] October, 2006, personally appeared Marvin I. Fredberg, proved to me through satisfactory evidence of identification, which were [NV] personally known [ID], Peter H. Sheahan, proved to me through satisfactory evidence of identification, which were [NV] personally known [ID], Sharon A. Elsworth, proved to me through satisfactory evidence of identification, which were [NV] personally known [ID],, and Kaichang Chang, proved to me through satisfactory evidence of identification, which were [NV] personally known [ID], to be the persons whose names are subscribed to the foregoing assignment and acknowledged that they executed the same as their free act and deed for the purposes therein contained.

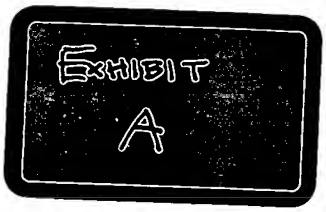
[NV] Peter Dulchinos

[Notary's seal here]

Notary Public Peter Dulchinos
My commission expires: Oct. 24, 2008

PETER DULCHINOS
Notary Public
Commonwealth of Massachusetts
My Commission Expires Oct 24, 2008

REDACTED



REDACTED

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Superior RF Transmission Performance

Fabric radomes are commonly used to provide environmental protection for antenna equipment. For minimum RF losses it is advantageous for the membrane material to have a low dielectric constant and loss tangent, and to be of minimum thickness. In RF transmission measurement testing, Vectran fiber reinforced fabric composite demonstrated excellent electrical properties including the low dielectric constant of 2.781 and loss tangent of 0.00989. Furthermore, characteristics of low water absorption minimize RF transmission loss in long term humid environments. The trend towards higher frequencies and wider and multi-band coverages allows Vectran fabric to be a leading candidate to provide superior RF transmission performance.

INVENTOR(S) SIGN AND DATE: REDACTED					
WITNESS NAME (PRINT)	WITNESS SIGNATURE	DATE	WITNESS NAME (PRINT)	WITNESS SIGNATURE	DATE

PATENTS AND LICENSING USE ONLY

Title from disclosure form Inventor's Names separated by comas	DATE RECEIVED	PATENT DOCKET NUMBER
IP/NDSC REV. REDACTED REDACTED	REDACTED	REDACTED

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EXHIBIT B

Mechanical & Materials

Vectran Radome Application

Raytheon
Electronic Systems

- XBR Radome Designed Using Vectran Fabric
  - Reliability = 0.999 for 20 year service life (Safety Factor >5) Including Knock Downs For:
    - Wind Load Variations
    - Environmental Degradation (UV, moisture, temperature, load cycles)
    - Variable & Sustained Loading Effects
    - Fabric Damage/Crease Fold Damage
    - Multi-Axis Loading Conditions
    - Material Property Variations

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